

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Withdrawn) An isolated single stranded anti-microRNA molecule comprising a minimum of ten moieties and a maximum of fifty moieties on a molecular backbone, the molecular backbone comprising backbone units, each moiety comprising a base bonded to a backbone unit, each base forming a Watson-Crick base pair with a complementary base wherein:

at least ten contiguous bases have the same sequence as a sequence of bases in any one of the anti-microRNA molecules shown in Tables 1-4, except that up to thirty percent of the bases pairs may be wobble base pairs, and up to 10% of the contiguous bases may be additions, deletions, mismatches, or combinations thereof;

no more than fifty percent of the contiguous moieties contain deoxyribonucleotide backbone units;

the moiety in the molecule at the position corresponding to position 11 of the microRNA is non-complementary; and

the molecule is capable of inhibiting microRNP activity.

2. (Withdrawn) A molecule according to claim 1, wherein up to 5% of the contiguous moieties are additions, deletions, mismatches, or combinations thereof.

3. (Withdrawn) A molecule according to claim 1, wherein at least one of the moieties is a deoxyribonucleotide.

4. (Withdrawn) A molecule according to claim 3, wherein the deoxyribonucleotide is a modified deoxyribonucleotide moiety.

5. (Withdrawn) A molecule according to claim 4, wherein the modified deoxyribonucleotide is a phosphorothioate deoxyribonucleotide moiety.
6. (Withdrawn) A molecule according to claim 4, wherein the modified deoxyribonucleotide is N'3-N'5 phosphoroamidate deoxyribonucleotide moiety.
7. (Withdrawn) A molecule according to claim 1, wherein at least one of the moieties is a ribonucleotide moiety.
8. (Withdrawn) A molecule according to claim 7, wherein at least one of the moieties is a modified ribonucleotide moiety.
9. (Withdrawn) A molecule according to claim 8, wherein the modified ribonucleotide is substituted at the 2' position.
10. (Withdrawn) A molecule according to claim 9, wherein the substituent at the 2' position is a C₁ to C₄ alkyl group.
11. (Withdrawn) A molecule according to claim 10, wherein the alkyl group is methyl.
12. (Withdrawn) A molecule according to claim 10, wherein the alkyl group is allyl.
13. (Withdrawn) A molecule according to claim 9, wherein the substituent at the 2' position is a C₁ to C₄ alkoxy - C₁ to C₄ alkyl group.
14. (Withdrawn) A molecule according to claim 13, wherein the C₁ to C₄ alkoxy - C₁ to C₄ alkyl group is methoxyethyl.
15. (Withdrawn) A molecule according to claim 8, wherein the modified ribonucleotide has a methylene bridge between the 2'-oxygen atom and the 4'-carbon atom.

16. (Withdrawn) A molecule according to claim 1, wherein at least one of the moieties is a peptide nucleic acid moiety.
17. (Withdrawn) A molecule according to claim 1, wherein at least one of the moieties is a 2'-fluororibonucleotide moiety.
18. (Withdrawn) A molecule according to claim 1, wherein at least one of the moieties is a morpholino phosphoroamidate nucleotide moiety.
19. (Withdrawn) A molecule according to claim 1, wherein at least one of the moieties is a tricyclo nucleotide moiety.
20. (Withdrawn) A molecule according to claim 1, wherein at least one of the moieties is a cyclohexene nucleotide moiety.
21. (Withdrawn) A molecule according to claim 1, wherein the molecule comprises at least one modified moiety for increased nuclease resistance.
22. (Withdrawn) A molecule according to claim 21, wherein the nuclease is an exonuclease.
23. (Withdrawn) A molecule according to claim 22, wherein the molecule comprises at least one modified moiety at the 5' end.
24. (Withdrawn) A molecule according to claim 22, wherein the molecule comprises at least two modified moieties at the 5' end.
25. (Withdrawn) A molecule according to claim 22, wherein the molecule comprises at least one modified moiety at the 3' end.

26. (Withdrawn) A molecule according to claim 22, wherein the molecule comprises at least two modified moieties at the 3' end.
27. (Withdrawn) A molecule according to claim 22, wherein the molecule comprises at least one modified moiety at the 5' end and at least one modified moiety at the 3' end.
28. (Withdrawn) A molecule according to claim 22, wherein the molecule comprises at least two modified moieties at the 5' end and at least two modified moieties at the 3' end.
29. (Withdrawn) A molecule according to claim 22, wherein the molecule comprises a nucleotide cap at the 5' end, the 3' end or both.
30. (Withdrawn) A molecule according to claim 22, wherein the molecule comprises an ethylene glycol compound and/or amino linkers at the 5' end, the 3' end, or both.
31. (Withdrawn) A molecule according to claim 1, wherein the nuclease is an endonuclease.
32. (Withdrawn) A molecule according to claim 31, wherein the molecule comprises at least one modified moiety between the 5' and 3' end.
33. (Withdrawn) A molecule according to claim 31, wherein the molecule comprises an ethylene glycol compound and/or amino linker between the 5' end and 3' end.
34. (Withdrawn) A molecule according to claim 1, wherein all of the moieties are nuclease resistant.
35. – 40. (Cancelled)
41. (Previously Presented) An isolated molecule comprising a maximum of fifty moieties, wherein each moiety comprises a base bonded to a backbone unit said molecule comprising the

microRNA molecule identified in SEQ ID NO: 139 or its corresponding anti-micro RNA molecule identified in SEQ ID NO: 445.

42. (Cancelled)

43. (Original) A molecule according to claim 41, wherein the molecule is modified for increased nuclease resistance.

44. – 47. (Cancelled)

48. (Withdrawn) An isolated single stranded anti-microRNA molecule comprising a minimum of ten moieties and a maximum of fifty moieties on a molecular backbone, the molecular backbone comprising backbone units, each moiety comprising a base bonded to a backbone unit, each base forming a Watson-Crick base pair with a complementary base wherein:

at least ten contiguous bases have the same sequence as a sequence of bases in any one of the anti-microRNA molecules shown in Tables 1-4, except that up to thirty percent of the bases pairs may be wobble base pairs, and up to 10% of the contiguous bases may be additions, deletions, mismatches, or combinations thereof;

no more than fifty percent of the contiguous moieties contain deoxyribonucleotide backbone units; and

the molecule is capable of inhibiting microRNP activity.

49. (Cancelled)

50. (New) The molecule according to claim 41, wherein at least one of the moieties is a modified ribonucleotide moiety.

51. (New) The molecule according to claim 50, wherein the modified ribonucleotide is substituted at the 2' position.
52. (New) The molecule according to claim 51, wherein the substituent at the 2' position is a C₁ to C₄ alkyl group.
53. (New) The molecule according to claim 52, wherein the alkyl group is methyl.
54. (New) The molecule according to claim 52, wherein the alkyl group is allyl.
55. (New) The molecule according to claim 51, wherein the substituent at the 2' position is a C₁ to C₄ alkoxy - C₁ to C₄ alkyl group.
56. (New) The molecule according to claim 55, wherein the C₁ to C₄ alkoxy - C₁ to C₄ alkyl group is methoxyethyl.
57. (New) The molecule according to claim 41, wherein at least one of the moieties is a 2'-fluororibonucleotide moiety.
58. (New) The molecule according to claim 50, wherein the modified ribonucleotide has a methylene bridge between the 2'-oxygen atom and the 4'-carbon atom.
59. (New) The molecule according to claim 41, wherein the molecule comprises at least one modified moiety on the 5' end.
60. (New) The molecule according to claim 41, wherein the molecule comprises at least two modified moieties at the 5' end.
61. (New) The molecule according to claim 41, wherein the molecule comprises at least one modified moiety on the 3' end.

62. (New) The molecule according to claim 41, wherein the molecule comprises at least two modified moieties at the 3' end.

63. (New) The molecule according to claim 41, wherein the molecule comprises at least two modified moieties at the 5' end and at least two modified moieties at the 3' end.

64. (New) The molecule according to claim 41, wherein the molecule comprises a nucleotide cap at the 5' end, the 3' end or both.

65. (New) The molecule according to claim 41, wherein the molecule consists of the microRNA molecule identified in SEQ ID NO: 139.

66. (New) The molecule according to claim 41, wherein the molecule consists of the anti-micro RNA molecule identified in SEQ ID NO: 445.